

IN THE CLAIMS:

Please amend claims 1, 5 to 7, 10, 13, 14, 16, 18, 22, 26 to 29, and 31 as follows:

1. (Twice amended) A device for making quantified determinations of the quality of surfaces, having an optical system, comprising:

first optical means having at least one illuminating means, said at least one illuminating means emitting an emitted light at a predetermined angle to a measurement surface,

second optical means being aligned at a predetermined angle to said measurement surface, said second optical means for receiving a reflected light from said measurement surface, whereby said second optical means has at least one photo sensor for emitting an electrical measurement signal that is characteristic of the reflected light,

control and evaluation means for controlling a measurement sequence and for evaluating a measurement results said control and evaluation means having at least one processor device and at least one memory means,

output display means,

whereby said at least one illuminating means has at least one light source, wherein said at least one light source is a light diode,

whereby emitted light from said illuminating means is

configured to provide a spectral characteristic having at least blue, green and red spectral components,

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a filter means being arranged between said at least one light source and said at least one photo sensor to change the spectral characteristic of the emitted light and/or the reflected light in accordance with predetermined filter properties so that the spectral characteristic essentially approaches that of a predetermined spectral distribution,

whereby said control and evaluation means evaluates said reflected light and derives at least one parameter variable therefrom that is characteristic of said measurement surface, and

whereby the light diode has a wavelength-dependent spectral intensity that is in the wavelength range between 480 and 620 nm and is greater than one-hundredth of the maximum spectral intensity.

5. (Twice amended) The device according to claim 1, wherein said at least one parameter is a representative measurement of a typical wavelength and amplitude of a topology of said measurement surface in a predetermined wavelength interval, whereby said evaluation may also be carried out in two or more wavelength bands.

6. (Twice amended) The device according to claim 5, wherein said predetermined spectral distribution is a standard distribution having a light type taken from the standard light type groups selected from the group consisting of a C light type standard, a D65 light type standard, and an A light type

standard.

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7. (Twice amended) The device according to claim 1,
wherein a spectral measurement characteristic is an aggregate of
the spectral characteristic of the emitted light and a spectral
sensitivity of the at least one photo sensor in proportion to an
aggregate of a spectral distribution of a light type standard
and a sensitivity of a human eye.

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10. (Twice amended) The device according to claim 1,
wherein said illuminating means further comprises at least a
second light source.

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13. (Twice amended) The device according to claim 1,
wherein at least a first part of said emitted light exhibits a
light pattern.

14. (Twice amended) The device according to claim 1,
further comprising a plurality of light/dark edges with at least
one part thereof extending at least sectionally parallel to one
another.

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16. (Twice amended) The device according to claim 1,
wherein said control and evaluation means is so configured that
at least one average parameter for at least a portion of a
gradient can be determined and a characteristic structural
variable can be determined for a structure-contingent property
of said measurement surface therefrom.

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18. (Twice amended) The device according to claim 17,
wherein said predetermined angle, at which said emitted light
from said at least one of said first optical means is directed

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to said measurement surface, is an angle selected from the group of angles consisting of 0°, 10°, 15°, 20°, 30°, 45°, 60°, 75°, 80° and 85°.

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22. (Twice amended) The device according to claim 1, wherein at least one photo sensor has at least two photo sensitive elements, said at least two photo sensitive elements having electrical output signals that can be ascertained individually and that differ in their spectral characteristics, so that the color of said reflected light can be ascertained as an optical parameter of said measurement surface.

26. (Twice amended) The device according to claim 25, further comprising at least one temperature measuring means for determining a characteristic temperature of each of said first and second optical means so that a temperature-corrected determination of at least one parameter can be made.

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27. (Twice amended) The device according to claim 26, wherein at least a portion of a progression of an image of said at least one light/dark edge is defined on said plurality of photo sensors and a characteristic surface parameter of said measurement surface is determined from a deviation of a measured path from an ideal path.

28. (Twice amended) The device according to claim 1, wherein the device is moveable relative to said measurement surface at a constant spacing therefrom, wherein the device further comprises a distance measuring means that quantitatively ascertains a relative movement and a memory means for storing the structural and/or optical parameters measured along predetermined measurement points on said measurement surface.

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29. (Twice amended) The device according to claim 28, further comprising at least one measurement wheel, wherein said at least one measurement wheel is positioned upon said measurement surface during measurement and rotates during said relative movement.

31. (Twice amended) A method for making quantified determinations of the quality of surfaces, said method comprising:

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providing first optical means having a first light source disposed as a light diode to direct an emitted light with blue, green and red spectral components at a predetermined angle onto a measurement surface;

providing second optical means having at least one photo sensor directed at a second predetermined angle to said measurement surface to receive a reflected light from said measurement surface, whereby said at least one photo sensor emits an electrical measurement signal that is characteristic of the reflected light;

providing control and evaluation means for controlling a measurement sequence and evaluating a measurement results, said control and evaluation means having at least one processor device and stores said measurement signal in a memory means;

providing an output display means for displaying said measurement results; and

evaluating said reflected light and deriving at least one

parameter variable therefrom that is characteristic of said measurement surface,

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whereby the light diode has a wavelength-dependent spectral intensity in the wavelength range between 480 and 620 nm and is greater than one-hundredth of the maximum spectral intensity.

Please add new claims 32 to 38 as follows:

32. (new) The device according to claim 10, wherein said second light source is a light diode.

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33. (new) The device according to claim 10, wherein each of said first and second light sources has a differing spectral characteristic.

34. (new) The device according to claim 13, wherein said light pattern has at least one light/dark edge.

35. (new) The device according to claim 14, wherein at least one section of said plurality of light/dark edges is of a form taken from the group consisting of a grid form, a cross-mesh form, an ellipse form, and a circular form.

36. (new) The device according to claim 18, wherein said predetermined angle differs between the said first and second optical means.

37. (new) The device according to claim 22, wherein at least one photo sensor has at least three photo sensitive elements, said at least three photo sensitive elements has electrical output signals that can be ascertained individually

and differ in their spectral characteristics so that the color of said reflected light can be ascertained as an optical parameter of said measurement surface.

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38. (new) The device according to claim 1, further comprising a measurement cycle of less than 0.2 seconds.
